

**NOAA
FISHERIES**

Implementing an Assessment Prioritization Process



NOAA FISHERIES

Why do we Assess Fish Stocks and Monitor Fisheries?

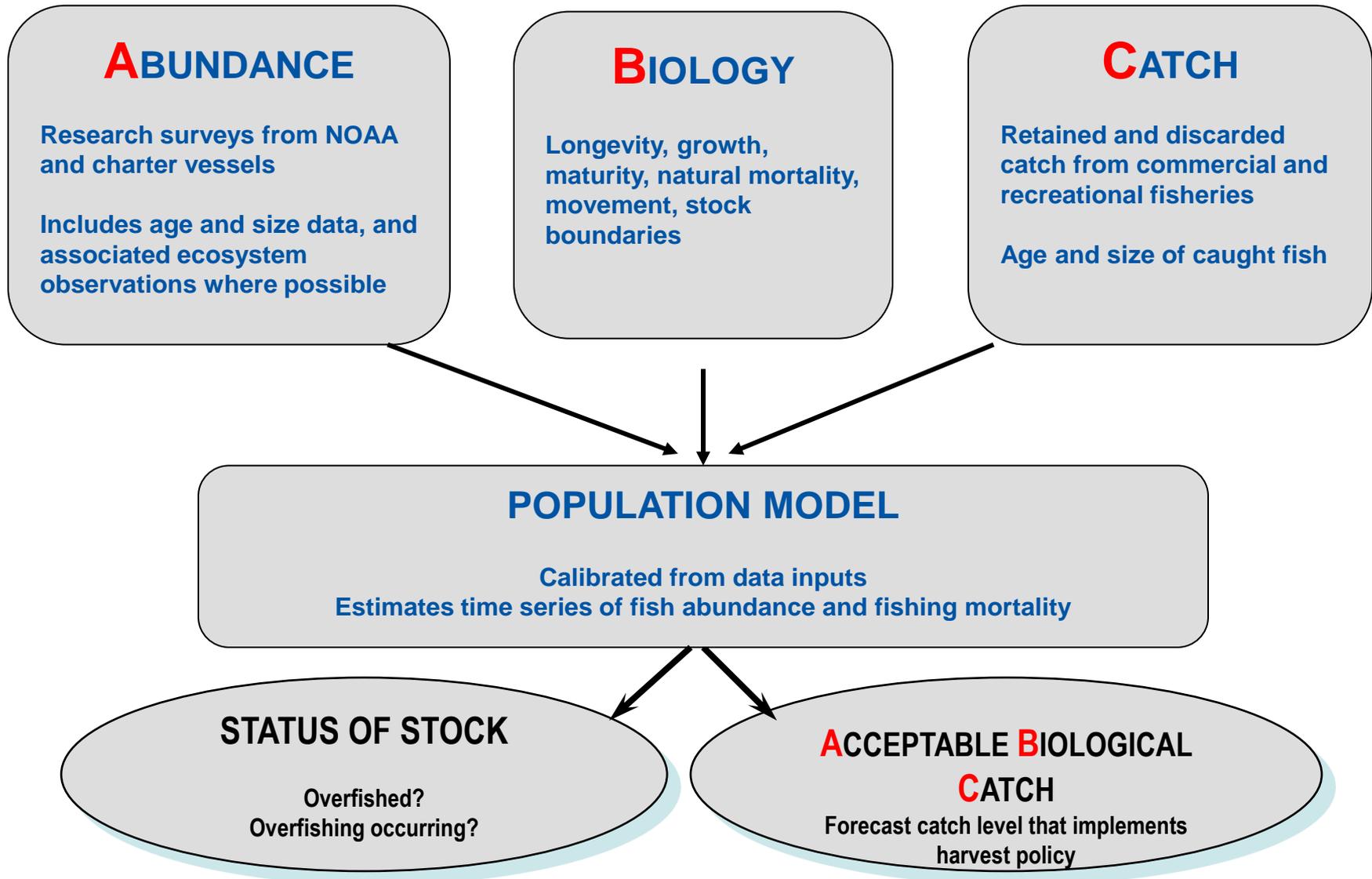
- **The MSA mandates that management be based on best scientific information available**
- **Fishery catch monitoring measures how much has been caught**
- **Stock assessments measure:**
 - **Whether or not stock has experienced overfishing**
 - **How much can be caught sustainably**
- **Assessments that are lacking or have high uncertainty can result in either inadvertent overfishing or foregone yield**

Assessments Calculate:

- Long-term stock productivity and sustainable harvest rate
- Current stock abundance
- Current harvest rate
- Forecast of changes in available yield due to ecosystem, environmental, and fishery factors
- Indicators of changes in ecosystem productivity



ABC's of Stock Assessment Process



Linking Investments to Assessments

- **Each stock's assessment uses data from many sources, as just shown**
- **Most large data sources simultaneously provide data for many species**
- **This many-to-many relationship confounds accounting the cost per assessment**
- **Investments build regional assessment capacity which then can produce individual stock assessment updates**



Assessments for 230 FSSI stocks

Center	Ecosystem	Number of Assessments per Year						Stocks Assessed (since 1999)		
		2008	2009	2010	2011	2012	2013	None	Partial	Full
AK	Alaska	31	31	30	31	31	31	4	3	28
NE	Northeast Shelf	30	17	10	21	26	18	0	17	31
NW/SW	California Current	3	13	2	13	3	13	6	2	37
PI	Pacific Islands	1				2		2	2	3
PI/SW	Pacific Highly Migratory	2	4	1	5	4	2	5	0	13
SE	Atlantic Highly Migratory	4	4	2	4	4	3	1	0	20
SE	Caribbean Sea							3	5	0
SE	Gulf of Mexico	4	6	6	6	5	7	2	2	16
SE	Southeast Shelf	9	4	7	6	7	6	3	5	20
ALL	ALL	84	79	58	86	82	80	26	36	168

*FSSI: Fish Stock Sustainability Index. Includes 230 important stocks out of 478 total managed stocks

Assessment Objectives

- **How good does each stock's assessment need to be to achieve the goals of preventing overfishing and obtaining optimum yield?**
 - What data are needed?
 - How comprehensive a model?
- **How frequently must it be updated?**
- **These stock-specific assessment objectives are needed in order to set priorities**



Assessment Prioritization History

- **Currently, local NMFS Science Center and Fishery Management Council set assessment schedule using ad hoc process;**
- **NMFS working group was formed in 2011 to develop a prioritization system in response to OMB request**
- **In 2013, call for prioritization process appearing in:**
 - **GAO review of stock assessments**
 - **introduced bill on improved science for MSA**



Prioritization Overview

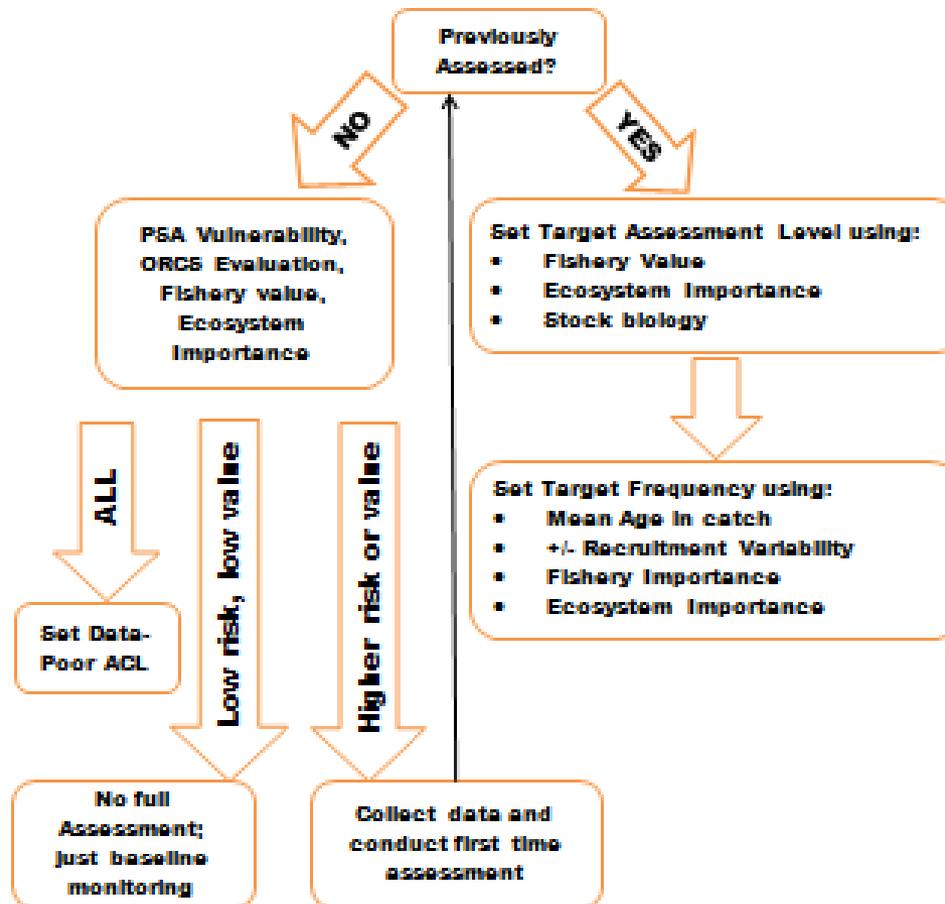
- Among stocks that never have been assessed:
 - *Identify those OK with baseline monitoring, and*
 - *Those needing priority for first-time assessment*
- Among previously assessed stocks, set stock-specific goals
 - *target assessment level; this drives the data requirements*
 - *target assessment update frequency*
- Annually update priorities for conducting assessments that will update the most overdue assessments and move assessments towards target levels
- Provide priority information to each regional process as they set upcoming assessment schedule given available resources



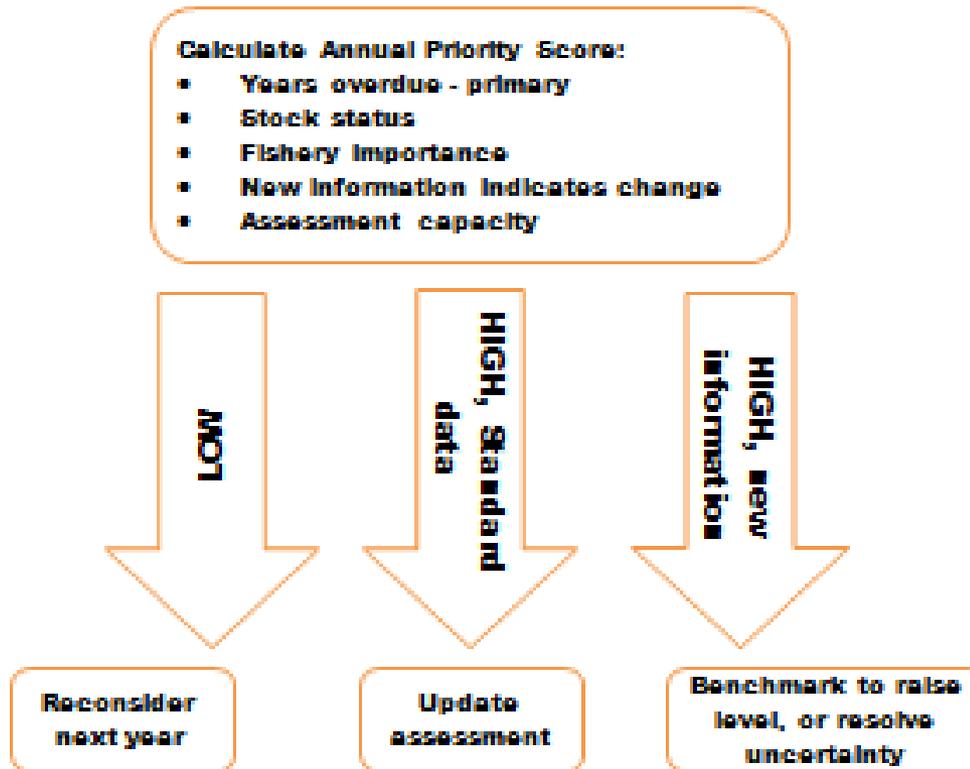
Data Needed for Prioritization

- **Fishery Importance**
- **Ecosystem Importance**
- **Stock biology – How much fluctuation is expected, on average?**
- **Stock Status – is it approaching overfished or overfishing?**
- **Assessment history – can we now resolve past uncertainties?**

Flowchart of Prioritization Process



Setting Priorities



Implementation Steps

- 1. Distribute to Fishery Management Councils and public for comment by May 1 (February 2014);**
- 2. Assemble data on prioritization factors (2014);**
- 3. Test prioritization system and produce final document (late 2014);**
- 4. Make database available to groups charged with setting priorities for regional assessments – early 2015**

Challenges for Prioritization

- **WORKLOAD:** Significant work by assessment teams in generating and organizing initial information;
- **REGIONAL:** addresses within-region assessment prioritization
 - does not address allocation between regions
- **BALANCED PORTFOLIO:** May need adjustment to balance between baseline monitoring for all managed stocks and highest quality assessments for some;

Key Messages

- **Full assessments blend Abundance, Biology, and Catch data into scientific advice for sustainable fisheries**
 - **Abundance and Catch data come from multi-stock monitoring programs**
- **Not all stocks need high-level, data-rich assessments, nor annual updates**
- **Prioritization uses key factors to establish target assessments levels and frequencies, and priorities to attain these targets**
- **Prioritization will be implemented in conjunction with Fishery Management Councils and other management entities**